

REMARKS

The Office Action dated February 27, 2007 has been reviewed and the application is amended in a manner believed to place same in condition for allowance. Reconsideration of the application is requested.

Applicants' appreciate the allowance of Claims 65-68 and 78 and the indication of allowable subject matter in independent Claim 52. Claim 52 has been amended to address the objection by deleting the word "second". Thus, Claim 52 is believed allowable.

The objection to the specification at page 7, line 6 has been addressed by correcting the typographical informality. Approval is requested.

The Information Disclosure Statement filed August 1, 2006 has not been officially made of record. We note that the attached USPTO PAIR database printout shows receipt of the Information Disclosure Statement including Form PTO-1449 on August 7, 2006. Further, complete copies of the Information Disclosure Statement and Form PTO-1449 are retrievable from the Image File Wrapper using the USPTO PAIR database. Applicants' respectfully request initialing and return of Form PTO-1449 (one page) with the next Office Action.

The rejection of Claims 58-64 and 69-77 under 35 USC §102(e) as being anticipated by Vincent, U.S. Patent No. 5 993 410 has been considered. Claims 58-64 have been cancelled and independent Claims 69 and 73 have been amended.

Vincent discloses an adjustable probe 10 including an irrigation valve 22 having a barbed tube receiving an irrigation source via hose 32 and opening into a body opening 34 of probe body 12. The irrigation valve 22 has a spring biased finger rest 60 and a piston 42 in a piston bore 44. Applying pressure to the finger rest 60 moves the first piston downwardly so that a transverse circular through hole 46 aligns with the irrigation source hose 32 to receive irrigation fluid which then traverses through piston bore 44

into the body opening of the probe body 12. Upon release of the finger rest 60, the piston returns to a closed position.

Column 3, lines 37-47 of Vincent discloses that the suction valve 24 has substantially the same structure as the irrigation valve 22. Column 3, lines 51-56 of Vincent discloses the suction valve 24 optionally adapted to facilitate partial suction or "sipping" of an operative site. Such "sipping" is preferred for smoke or vapor evacuation. Column 6, lines 25-46 of Vincent discloses the suction valve 24 operating in a similar manner to the irrigation valve 22, except that it provides controlled suction of fluid from the operative site. Column 6, lines 33-46 further discloses an "optional smoke evacuation feature" that can be utilized to partially and controllably open the suction valve 24. If smoke evacuation requires "rotation of the finger rest or any other component of the suction valve to permit partial suction", then the torque required for smoke evacuation is preferably less than the torque required to rotate the suction valve's barrel with respect to probe body 12. The structure of Vincent that provides the optional smoke evacuation feature is not illustrated or further disclosed, and thus cannot be clearly determined.

Applicants' amended independent Claim 69 recites a second valve actuator "circumferentially enclosing a portion of said first suction valve actuator". This feature is not present in Vincent.

Dependent Claim 70 recites "first and second suction valves respectively operatively associated with said first suction valve actuator and said second suction valve actuator". Vincent discloses a single suction valve 24 providing a controlled flow path. There is no disclosure or suggestion in Vincent of a second valve element.

Dependent Claim 72 recites that "said first suction valve actuator is operable to provide maximum flow regardless of the position of said second rotatable suction valve actuator". This feature is not present in Vincent.

For the above reasons, Claim 69, and Claims 70-72 dependent therefrom, are believed allowable over Vincent. Therefore reconsideration and withdrawal of the instant rejection is accordingly requested.

Applicants' independent Claim 73 recites a surgical fluid flow controlling handpiece including a housing, an input connection, a first flow control actuator to provide a relatively high fluid flow rate and "a second flow control actuator, independently operable from the first flow control actuator". As discussed above, in Vincent, the optional smoke evacuation feature requires rotation of the finger rest or any other component of the suction valve to permit partial suction. Thus, in Vincent the finger rest is used to provide both a high flow rate and a partial flow.

Claim 73 further recites "the second flow control actuator maintaining a selected fluid flow rate when said second flow control actuator is released". Vincent does not disclose or suggest the concept of maintaining a second fluid flow rate when the finger rest is released.

Claims 74-77 are believed allowable for the reasons set forth above with respect to Claim 73. Further, Claim 76 recites that the second flow control actuator remains stationary during movement of the first flow control actuator. As set forth above, Vincent discloses that the finger rest or other component functions as a first flow control actuator and as a second flow control actuator. There is no disclosure in Vincent of a second flow control actuator that is stationary when the first flow control actuator is operated.

Applicants' Claim 77 recites that the "second flow control actuator is rotatable and maintains its position when released". There is no disclosure or suggestion that the finger rest of Vincent maintains its position when released. Further, there is no disclosure in Vincent of any other element acting as a second flow control actuator that maintains its position.

New dependent Claims 79-86 are believed allowable for the reasons set forth above with respect to Claim 73. Further, Claim 79 recites that "said first flow control actuator is operable to provide maximum flow regardless of the position of the second flow control actuator". This feature is not disclosed or suggested by Vincent.

Applicants' Claim 82 recites the reciprocating valve element "having a core with opposing ribs projecting radially with respect to the axis". A reciprocating valve element having a core with opposing ribs is not disclosed by Vincent.

Applicants' Claim 83 recites the second flow control actuator comprising a rotating valve element including a tubular sleeve. This feature is not believed present in Vincent.

Applicants' Claim 84 recites that the second flow control actuator "circumferentially encloses a portion of said first flow control actuator". As discussed above, there is no disclosure in Vincent of a second flow actuator enclosing a portion of a first flow control actuator.

Claim 85 recites a "valve barrel for circumferentially enclosing said second flow control actuator". This combination of features, along with the features recited in Claim 84, is not believed present in the prior art.

Claim 86 recites first and second valve elements for the respective flow control actuator. There is no disclosure or suggestion in Vincent of more than one valve element.

For the above reasons, Claims 73-77, along with added Claims 79-86, are believed allowable over Vincent and reconsideration and withdrawal of the instant rejection is accordingly requested.

New Claims 87 and 88 depend upon Claim 69 and are believed allowable for the reasons set forth above. Further, Claim 87 is believed allowable for the reasons set forth above with respect to Claim 76.

The rejection of Claims 55 and 56 under 35 USC §103 as being unpatentable over Zinnanti, U.S. Patent No. 5 348 555 in

view of Saravia, U.S. Patent No. 5 484 402 has been considered.

Zinnanti discloses an endoscopic suction, irrigation and cautery instrument having a pair of actuator buttons 98, 100 for selectively connecting an irrigation passage 70 or a vacuum passage 72 to a main passage 30. Figure 8 of Zinnanti shows a stop nut 96 provided with the actuator button 100. The stop nut 96 is adjustable to limit the amount of extension of the valve plunger 80 into the bore 76. Thus, the adjustment nut 96 merely decreases the maximum amount of suction permitted when the valve plunger is pushed inwardly a maximum distance.

The rejection relies on Saravia for the teaching of a remote irrigation pump. At this time Applicants do not challenge the use of a remote irrigation pump to provide irrigation fluid to the instrument of Zinnanti.

Applicants' Claim 55, however, recites a "hand engagable, rotating member adjacent and separate from said hand engagable reciprocating member, said hand engagable, rotating member comprising a rotatable valve element".

As discussed above, Zinnanti discloses a valve plunger arrangement. Zinnanti, however, does not disclose or suggest any rotating valve element, much less a rotating member for rotating any rotatable valve element in the suction flow path. Instead, the stop nut 96 of Zinnanti merely adjusts the length of travel of the valve plunger 80.

Further, Claim 55 recites the hand engagable, rotating member adjacent and "separate from" said hand engagable, reciprocating member. In Zinnanti, the stop nut is not separate from the reciprocating member.

Applicants' Claim 56 further recites the hand engagable, reciprocating member providing "maximum suction regardless of the position of the hand engagable, rotating member". As discussed above, the stop nut 96 of Zinnanti can not reasonably be considered a hand engagable rotating member for rotating a rotatable valve element (as recited in Claim 55),

as the position of the stop nut 96 is adjustable to prevent maximum suction from occurring. Further, the nut varies the suction rate when adjusted.

Claim 56 further recites "said rotating member remaining stationary during movement of said hand engagable, reciprocating member". The stop nut 96 of Zinnanti clearly moves with the valve plunger.

For the above reasons, Claims 55 and 56 are believed allowable over Zinnanti in view of Saravia, and reconsideration and withdrawal of the instant rejection is accordingly requested.

The rejection of Claims 55-57 under 35 USC §103(a) as unpatentable over Vincent in view of Saravia has been considered.

As discussed above, Vincent discloses a suction valve 24 having a finger rest 64 for moving a piston 42 linearly to open a flow path. There is, however, no disclosure of "a hand engagable, rotating member adjacent and separate from said hand engagable, reciprocating member" as recited in Applicants' Claim 55.

As discussed above, column 6, lines 24-46 of Vincent discloses rotating the finger rest or other component of the suction valve to facilitate partial suction. Thus, only a single suction valve is disclosed. Therefore, there is no disclosure in Vincent of both a "reciprocating valve element" and a "rotatable valve element" as recited in Applicants' Claim 55.

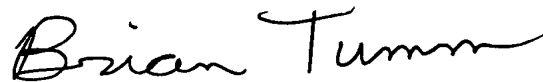
Applicants' Claim 56 further recites the rotating member "remaining stationary during movement of said hand engagable, reciprocating member". As discussed above, in Vincent, the finger rest moves linearly to open the suction valve and is disclosed as being rotated to permit partial suction. Thus, the rotating member/finger rest does not remain stationary during movement of the piston.

For the above reasons, Claims 55-57 are believed allowable over Vincent and Saravia, and reconsideration and withdrawal of the instant rejection is accordingly requested.

Added Claim 89 is believed allowable for the reasons set forth above with respect to Claim 55. Claim 89 recites that the "hand engagable rotating member includes an arm projecting radially outwardly relative to the axis for rotating said rotatable valve element". The claimed arm is not disclosed in the applied prior art, much less in combination with a rotatable valve element.

In view of the above, the instant application is believed to be in condition for allowance, and action toward that end is respectfully requested.

Respectfully submitted,



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Encl: USPTO Database printout for
U.S. Serial No. 10/685 690 dated 6/26/07
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136.07/05

10/685,690 Surgical suction irrigator

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